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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,149	05/16/2005	Reinhard Schneider	B-7229	6228
Frank J Bonini Jr Harding Earley Follmer & Frailey 1288 Valley Forge Road P O Box 750 Valley Forge, PA 19482-0750				
EXAMINER				
BELL, BRUCE F				
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1795				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/526,149

**Applicant(s)**

SCHNEIDER ET AL.

**Examiner**

Bruce F. Bell

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) 26-41, 45-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-850)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 10/6/05; 6/15/07; 7/21/08

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election with traverse of claims 1-25 and 42-46 in the reply filed on 11/26/08 is acknowledged. The traversal is on the ground(s) that the relationship between the apparatus and the processing method are a close one. This is not found persuasive because in an apparatus, it is distinguishing features which need to be found, where as in the method it is the process steps that need to be found. Since the method requires electrolytically treating a work piece which is not a requirement in the apparatus, since it is a process of using, the search for the apparatus does not require the search for the process. In fact the search for the method would fall out in class 205/125 where as the apparatus would fall out in class 204/278.5. There would be other subclasses to search also such as 205/291, 292 as well as others for the method and 204/198, 202, 224R and 275.1. Therefore, the search for the method is different than that for the apparatus as seen above and would require the examiner to perform additional burdensome searching. Further, the method claims as presented does not set forth specific process limitations on how the work piece is electrolytically treated other than reciting apparatus limitations which do not set forth how the work piece is treated. Should applicants petition the restriction requirement, the examiner will impose a 35 USC 112 rejection both first and second paragraphs with respect to this issue.

The requirement is still deemed proper and is therefore made FINAL.

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (d) BRIEF SUMMARY OF THE INVENTION.
- (e) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (f) DETAILED DESCRIPTION OF THE INVENTION.
- (g) CLAIM OR CLAIMS (commencing on a separate sheet).
- (h) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

Applicant is requested to place the above section headings prior to each section of their instant specification.

1. The disclosure is objected to because of the following informalities:

Page 6, lines 1-2; Please remove reference to claims 1 and 26 in the specification. Claims are subject to change during prosecution and therefore, applicant is requested to insert that information from claims 1 and 26 that they deem necessary into the instant specification in place of the reference to claims 1 and 26.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4,8-18, 23-25, 42-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Hosten (4898657).

Hosten disclose an electroplating apparatus, which has a work pieces being conducted through an electrolyte solution in a horizontal path, has cathodic contacting by contact clamps, which move with the work piece through the device. See abstract. A printed circuit board Lp is passed along the horizontal path which would extend perpendicular to the plan and in a direction of an arrow P of Figure 2. The path for the printed circuit board Lp extends between an upper anode Ao and a lower anode Au. The printed circuit board Lp has a lateral edge region which extends through the wall Bz of the treatment cell, which wall has a slot shaped opening extending along the throughput direction of the path P, which is closed by a seal D. The seal D is composed of a lower rigidly arranged sealing member and of an upper sealing member that can be moved in a vertical direction and is pressed against the printed circuit board Lp by compression springs Df1. See col. 3, lines 21-44. The laterally extending edge of the printed circuit board Lp, which projects through the seal D is seized for cathodically contacting by a plurality of contact posts or clamps Kk that are arranged spaced one from another and are constructed as forceps-like clamps. Each of these contact posts or

clamps Kk is composed of an upper claim jaw Kbo and of a lower clamp jaw Kbu. The longitudinal guidance of dog pins Ms of the contact posts Kk in the two channels N is restricted to the region in which the printed circuit boards Lp are to be cathodically contacted and in which the two toothed belts drive together with the contact posts simultaneously fulfill the job of a transport means for horizontal transport of the printed circuit board along the path P. See col. 3, lines 45-51 and col. 3. line 68 – col. 4, line 7. An angular power pick up Sao is applied to the upper clamp jaw Kbo on a backside thereof and this power pick up Sao slides on contact springs Kf for the transmission of the cathode current. These contact springs Kf are secured to an upper live rail. The power pick up Sau slides on contact springs Kf for the transmission of the cathode current and these contact springs Kf are secured to a lower live rail Ssu. The live rails Sso and Ssu are clamped between the retaining rails Hso and Hsu and separated by an intermediate insulating ply Z. The described nature of the power transmission comprising the power pick ups Sao and Sau and the live rails, Sso and Ssu as well as the arrangement of the closing springs, Sf, makes it possible to use the contact clamps Kk for different thicknesses of printed circuit boards, Lp without the contact pressure thereby being significantly changed. See col. 4, lines 19-38.

The prior art of Hosten anticipates the applicants instant invention as instantly claimed. The workpiece of the Hosten device is shown as Lp, the current supply is designated as the power transmission and discloses that cathode current is supplied. The contact strips are shown being joined together in one contacting frame to receive the workpiece as shown in Figure 1 where an upper and lower clamps Kbo and Kbu are

set forth along with retaining rails Hso and Hsu. The anodes disclosed are considered to be the same feature as the counter electrodes, Since they are used in the same manner as that of the instant invention. Therefore, the prior art of Hosten sets forth the instant invention as instantly claimed.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 8-18, 42-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Geissler et al (6238529).

Geissler et al disclose an apparatus for electrolytically treating printed circuit boards 3, wherein counterelectrodes 1, 2 are disposed opposite the plane of conveyance and substantially parallel thereto on at least one side, so that the electrolytic chambers 4, 5 are formed between counter electrodes, which are situated opposite one another or between the counter electrodes and the plane of conveyance, the counter electrodes forming respective substantially continuous electrode faces. Guide elements 7, 8 for the printed circuit boards are disposed in the electrolytic chamber. Contact elements 11 are provided for the electrical contacting of the printed circuit boards. Electrolyte spraying arrangements 13 are provided for conveying the electrolytic fluid towards the surfaces of the printed circuit boards. See abstract. The printed circuit boards or conductor foils can be guided in a horizontal or vertical

orientation. See col. 3, lines 64-67. To prevent treatment fluid from emerging from the apparatus, sealing means are provided at the inlet and the outlet of the apparatus for the printed circuit boards and conductor foils. Squeeze rollers may be used as the sealing means. The counter electrodes are disposed so far remote from the sealing means that a current density, adapted to locations in the vicinity of the inlet and of the outlet of the printed circuit boards and conductor foils, is substantially exactly identical to the mean current density between these locations. The anodes shown in figure on are illustrated as the counter electrodes. The anodes 1, the printed circuit boards or conductor foils 3 and the upper electrolytic chamber 4 situated therebetween are shown in figure 1. See col. 5, lines 35-57. The printed circuit boards to be treated are preferably guided centrally by upper and lower guide elements 7,8 between the upper and lower anodes 1, 2 and are conveyed in the direction of conveyance by clips and also serve as electrical contact elements. The item to be treated must be electrically contacted and connected to a bath current source. Contacting clips 11 are used for this purpose and engage with the edge of the item to be treated or other contact elements are used therefore. The electrical connection between the clips 11, which travel jointly with the circuit board, and the bath current source is provided via sliding contacts. The linearly driven contacting clips 11 assume the function of conveyance for the printed circuit boards. The firmly gripped boards are reliably conveyed through the electroplating system even when the guide elements 7, 8 are not driven. See col. 6, lines 49-65.



The prior art of Geissler et al anticipates the applicants instant claims as shown by way of the disclosure above. Geissler et al discloses the anodes used as counterelectrodes, discloses the contact strips that when joined together in one contacting frame, holds the edges of the work piece as the work piece is conveyed through the electrolytic cell so that the work piece can be electroplated and further shows that the contact strips are connected to a current supply.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-6, 8-25, 42-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Blasing et al (4776939).

Blasing discloses a device for electroplating electric circuit boards and includes an electroplating bath and a plurality of transporting devices which hold objects to be treated when they are conveyed through the plating bath. The transporting devices are pairs of clamping yokes arranged on a common endless rotating belt and positionable from a clamping position in which they engage the object being treated and release position in which they release the object. See abstract. The transporting devices may be clamps which releasably engage the edges of circuit boards over the transport path in the plating chamber. Each clamp may include two yokes biased by springs supported there between, so that the springs exert pressure on the yokes, a clamping force to

place them in a clamping position in which they seize an edge of the circuit board being treated. A rail is used having an onset surface which acts on at least one of the yokes to bring the yoke in a non-transporting region to a release position. The yokes provide a very strong clamping action whereby the yokes can be easily placed to the position in which the yokes engage the circuit board or to the position in which the yoke releases the circuit board being treated. See col. 2, lines 22-36. A guide rail for guiding the yokes, and being endless and rotatable, so as to rotate the pairs of yokes from the position in the electroplating bath to the position outside the electroplating bath, in which the yokes release the objects being treated by the rail with the onset surface is disclosed. See col. 2, lines 37-42. A compression spring may be provided for each yoke, each yoke being pivotable about an axis and having an arm overlapping a respective spring which is positioned above a respective axis and below the arm. See col. 2, line 48-52. The current supply means may be provided on the transport device to supply current to the circuit boards being treated which forms the cathodes in the electroplating bath. See col. 2, lines 53-56. Anodes 8 can be formed as plates of the material being deposited on the circuit boards. See col. 3, lines 49-51. The transport means includes clamps which each includes two yokes 17 and 18 which are acted upon by the pressure of springs 19 and are pivoted at their hinge and current conductive connections 20 so that their lower ends 21 and 22 are pressed relative to each other by the spring pressure and there lower ends seize or engage the side edge of the circuit boards. See col. 4, lines 9-16. Springs are supported between the arms 34 and 39 of their respective yokes 17, 18, positioned above hinge axles 20. Both yokes

may be formed so that they don't pivot about pivot axles 20 but the hinge connection would be omitted while yoke 17 would be displaceable vertically relative to yoke 18 and tension spring for exerting the clamping force would be provided. Such a tension spring would press the ends 21 and 26 of the yokes towards each other. The relative movement of the yoke ends when they leave the transporting area is executed by an onset surface on the rotary rail 32. See col. 4, line 54 – col. 5, line 2.

The prior art of Blasing et al anticipates the applicants instant invention as set forth above. Since the prior art of Blasing et al shows in Figure 2 the device as instantly claimed having a device which holds the circuit board between two anodes and shows having a current conductive connection and the entire device is in a contacting frame and placed in a treatment tank it appears that the instant claims have inherently been met.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BFB  
February 15, 2009

/Bruce F. Bell/  
Primary Examiner, Art Unit 1795